FOUR MILE RUN BRIDGE (MEMO)
George Washington Memorial Parkway, spanning Four Mile Run
Arlington Vicinity
Arlington County
Virginia

HAER No. VA-83

WRITTEN HISTORICAL AND DESCRIPTIVE DATA

HISTORIC AMERICAN ENGINEERING RECORD
National Park Service
Department of the Interior
P.O. Box 37127
Washington, D.C. 20013-7127

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HISTORIC AMERICAN ENGINEERING RECORD

FOUR MILE RUN BRIDGE (NEW)
HAER No. VA-83

I. INTRODUCTION

Location: George Washington Memorial Parkway milepost 13.26, 2.3 miles from Interstate 395; carries GWMP over Four Mile Run, a tributary to the Potomac River in Arlington County.

FHwA No.: 3300-022P.

Date of Construction: 1931; demolished and replaced 1939; demolished and replaced 1977

Type: Continuous steel multi-beam bridge.

Designer: Federal Highway Administration with approval from the National Park Service.

Present Use: Carries noncommercial vehicular traffic on the Mount Vernon Memorial Highway over Four Mile Run.

Present Owner: National Capital Region, National Park Service.

Significance: Built as part of the GWMP. The 1931 bridge was one of the twelve original MVMH bridges.

Project Information: Documentation of the George Washington Memorial Parkway and Clara Barton Parkway was undertaken as a multi-year project by the Historic American Buildings Survey and the Historic American Engineering Record (HABS/HAER), a combined division of the National Park Service, Robert Kapsch, Chief. The project was sponsored by the Park Roads Program of the National Park Service, John Gingles, Deputy Chief, Engineering and Safety Services Division. The Project Supervisor was Sara Amy Leach, HABS Historian. Bridge reports were prepared by Elizabeth M. Nolin (1988); Michael P. Kucher (University of Delaware, 1993); and Jennifer P. Wentzien (University of Washington, 1994).

HABS Report No. VA-69 prepared by Timothy Davis (University of Texas) provides an overview history of the entire parkway project. Jack E. Boucher and Jet Lowe produced the large-format photographs. The Washington-based summer 1994 documentation team was headed by landscape architect Tim Mackey (Harvard University, Graduate School of Design).

II. HISTORY

The New Four Mile Run Bridge is located along the Mount Vernon Memorial Highway (MVMH) segment of the George Washington Memorial Parkway (GWMP). Four Mile Run forms the border between Alexandria County and the City of Alexandria. The present bridge is the third MVMH bridge to cross Four Mile Run due to realignments of the roadway. The site was once the Potomac estuary, but now is an unstable hydraulic fill comprised of sand and gravel over mud[1]. The bridge is the last of numerous bridges crossing Four Mile Run prior to its opening into the Potomac estuary.

An early drawing for a Four Mile Run Bridge along a proposed memorial highway is dated 1890.[2] This structure is probably of stone masonry construction. Its detailing reflects the popular neoclassicism of the period. Delineations dated January 4, 1927 propose a granite facing in keeping with early notions of the highway as a traditional linear boulevard rather than a less formal motor parkway, designed to follow the contours of the land. However, as completed the original twelve MVMH bridges were typical of less formal bridges faced with native stone rather than granite. Similar designs are found in many parks and parkways of the period.

As completed in 1931, Four Mile Run Bridge reflected the influence of the consulting landscape architect Gilmore Clarke on bridges along the MVMH. Consulting architect Gilmore Clarke was hired by the BPR in 1928 due to his work on New York's Westchester County Parkway system, a model for the MVMH. Bridge elevations were redesigned in 1929 under the direction of Clarke.

The 1931 stone-faced bridge was composed of two semi-circular arches. Dimensioned masonry was a light gray granite which was furnished by the Woodstock Granite Company of Woodstock, Maryland. Dimensioned masonry was used for copings, as quoins on the wing walls and the center pier, and as a ring course around the arched openings. The stone masonry consisted of brown and golden granite and mica-schist varying in color from a blue to a rust color. The mica-schist was quarried locally by the Stoneyhurst Quarries, near Cabin John, MD. A second bridge crossing Four Mile Run was built in 1940 following the realignment of the highway due to the expansion of Gravelly Point Airport, since renamed National Airport.[3] Both structures were designed as reinforced concrete fixed-end arches with stone facing.

The 1977 bridge over Four Mile Run is a steel girder system, continuous across two spans. The continuous girder bridge was well developed in the U.S. before the end of the nineteenth century.[4] By this time a span length of 117' was itself of little significance. The bridge is generally of functional design revealing a modernist preference for exposed structure. The bridge nonetheless retains elements of the

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[1]U.S. Department of Agriculture, Bureau of Public Roads, Mount Vernon Memorial Highway Final Construction Report, Unit III, Bridges, 1932, p. 105-112.

[2]U.S. Secretary of War, National Road from the Aqueduct to Mount Vernon, VA, incl. delineations of bridge elevations, 1890.

[3]See plans on file at National Park Service, National Capital Regional Headquarters for Project 5B1, NPS Ref. No. 850/80,167.

[4]Carl W. Condon, American Building Art: The Twentieth Century, p.99.

earlier rustic style in its stone-faced wing walls.

Description

The New Four Mile Run Bridge has a total length of 337', and a deck width of 93'. The continuous steel, multi-beam superstructure is composed of three spans, the longest of which is 114'. The deck is cast-in-place concrete. Wing walls are reinforced concrete with stone-facing. A stock railing of cast aluminum, 3'6" high, fastened at the parapet is used. There is a 9' sidewalk on the east side. As with other bridges carrying the non-commercial traffic of the GWMP, it is designed to carry a standard H-20 loading of the American Association of State Highway Officials.[5]

[5]"Structure Inventory and Appraisal Sheet - Structure No. 3300-022P." 4/21/93.

III. SOURCES

EDAW Incorporated. "Cultural Landscape Report Mount Vernon Memorial Highway," Volume 1: History; Volume II: Documentation; Appendix I: Specifications for Bridges. 1987.

Records Office of the Eastern Federal Lands Highway Division, Federal Highway Administation, Sterling, VA. "Final Construction Report for Project 5B1." Unable to locate this report at the Eastern Federal Lands Division, Federal Highway Administration, Sterling, Virginia.

U.S. Department of Agriculture, Bureau of Public Roads. "Report on Alternate Routes for the Proposed Memorial Highway." January 1929.

Includes drawings of bridges dated January 4, 1927.

U.S. Department of Agriculture, Bureau of Public Roads. "Mount Vernon Memorial Highway Final Construction Report, Unit III, Bridges." 1932. Box 1399; 420 General Virginia - 1926-29; Bureau of Public Roads Classified File 1912-1950, Record Group 30; National Archives at College Park, MD.

U.S. Department of Agriculture, Bureau of Public Roads. "Mount Vernon Memorial Highway, Contract Drawings." December, 1929.

Located on microfiche at National Capital Region Park Headquarters, Washington D.C. See Contract Drawings G539-G546 for Bridge over Four Mile Run.

U.S. Department of Commerce, Bureau of Public Roads. Plans for Proposed Project 5B1. Microfiche reductions of original construction drawings on file at the Bridge Inspection office of the Eastern Federal Lands Highway Division, Federal Highway Administration, Sterling, VA. Drawings are also available on microfiche from the National Capital Region Park Headquarters, National Park Service, Washington D.C.

Plans for the 1977 bridge were not consulted.

U.S. Department of the Interior, Historic American Buildings Survey (HABS), No. VA-69, "George Washington Memorial Parkway," 1994. Prints and Photographs Division, Library of Congress, Washington D.C.

U.S. Department of the Interior, National Park Service. "Structure Inventory and Appraisal Sheet - Structure No. 3300-022P." 4/21/93. Available from Eastern Federal Lands Division, Federal Highway Administration, Sterling, Virginia.

U.S. Secretary of War. "National road from the Aqueduct bridge to Mount Vernon Virginia," Letter from the Secretary of War Transmitting with a letter from the Chief of Engineers, a report of a survey for a National Road from the Aqueduct Bridge to Mount Vernon, Virginia, maps, plates (US - 51st Congress - 1st session, House document No. 106), (1890).